

In the Claims (Clean copy as amended)

Please cancel claims 10, 11, 15-17, 23, 41, 43, 49, 51-69, 87, 92, 94-95, 100-113, 115-116, 118, and 120-121.

Please amend the remaining claims as shown below:

1. Previously Canceled.
2. Previously Canceled.
3. Previously Canceled.
4. Previously Canceled.

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5. (Four Times Amended) A composition to repel or kill insects, fungi, nematodes and bacteria, comprising, an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or a component thereof in an amount of from 1 to 1000 ppm of the emulsion, wherein said essential oil or component thereof comprises at least one compound selected from the group consisting of *cis*-anethole, *trans*-anethole, anisaldehyde, anisole, camphene, camphor, carvone, carvacrol, cinnamic aldehyde, citronellal, cineol, 1,8-cineole, *p*-cymene-8-ol, decanal, geranial, geraniol, geranyl acetate, isoborneol, lavanduol, limonene, linalool, linalyl acetate, menthol, menthone, methyl chavicol, methyleugenol, methylinone, nonanal,  $\alpha$ -pinene,  $\beta$ -pinene,  $\beta$ -phelladrene,  $\alpha$ -phelladrene,

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cont

pulegone, terpenyl acetate,  $\alpha$ -terpinene,  $\gamma$ -terpinene, terpinene-4-ol, thymil acetate and thymol.

6. (Previously Amended) The composition of Claim 5, wherein said essential oil or component thereof is at least one compound selected from the group consisting of carvacrol, cymene and anethole.
7. (As Filed) The composition of Claim 6 wherein said component is anethole.
8. (As Filed) The composition of Claim 7 wherein said component is *trans*-anethole.
9. Previously Canceled
10. Canceled.
11. Canceled.
12. (Previously Amended) The composition of Claim 119 in a liquid form.
13. Previously Canceled

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14. (Twice Amended) A paint including, a composition to repel or kill insects, fungi, nematodes and bacteria, comprising, an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or a component thereof in an amount of from 1 to 1000 ppm of the emulsion, wherein said essential oil or component thereof is derived from at least one plant species in the Family *Labiatae* and *Umbellifera*.

15. Canceled.

16. Canceled.

17. Canceled.

18. Previously Canceled

19. Previously Canceled

D3 20. (Twice Amended) A composition to repel or kill insects, fungi, nematodes and bacteria, comprising, an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or a component thereof in an amount of from 1 to 1000 ppm of the emulsion, wherein said essential oil or component thereof is derived from at least one plant species in the Family *Labiatae* and *Umbellifera*, said formulation further including paraffin.

21. Previously Canceled

D4 22. (Three Times Amended) The composition of Claim 5 further comprising an emulsifying agent.

23. Canceled.

24. (Previously Twice Amended) A method of protecting a plant against pathogenic or parasitic organisms comprising applying to at least one of the foliage and rhizosphere of said plant, a composition comprising an oil-in-water emulsion

comprising, in the oil phase, as an active ingredient, an essential oil or at least one component thereof in an amount of from 1 to 1000 ppm of the emulsion in an amount sufficient to prevent adverse effects to the plant caused by said pathogenic organisms.

DS 25. (Twice Amended) The method of Claim 24 wherein said pathogenic or parasitic organisms are at least one organism selected from the group consisting of nematodes, bacteria, fungi and insects.

26. (As filed) The method of Claim 25 wherein said insects are selected from the group consisting of mites, ants, aphids, and termites.

27. (As filed) The method of Claim 26 wherein said insects are at least one species selected from the group consisting of *Tetranychus*.

28. (As filed) The method of Claim 27 wherein said insects are *Tetranychus cinnabarinus*.

DS 29. (Twice Amended) The method of Claim 24 wherein said bacteria are at least one species selected from the group consisting of *Erwinia*, *Xanthomonas*, *Pseudomonas*, *Clavibacter*, and *Agrobacterium*.

30. (As filed) The method of Claim 29 wherein said bacteria are at least one species selected from the group consisting of *Agrobacterium tumefaciens*, *Clavibacter*

*michiganensis*, *Erwinia amylovora*, *Erwinia carotovora*, *Pseudomonas syringae*, and *Xanthomonas axonopodis*.

31. (As filed) The method of Claim 30 wherein said fungi are at least one species selected from the group consisting of *Fusarium*, *Rhizoctonia*, *Sclerotinia*, and *Phytophthora*.

32. (As filed) The method of Claim 31 wherein said fungi are at least one species selected from the group consisting of *Fusarium moniliforme*, *Rhizoctonia solani*, *Sclerotinia sclerotium*, *Phytophthora capsici* and *Phytophthora fragaria*.

DC 33. (Twice Amended) The method of Claim 24 wherein said essential oil or component thereof is derived from at least one essential oil producing plant species of a genera selected from the group consisting of *Thymbra*, *Satureja*, *Origanum*, *Corydothymus*, *Pinpinella* and *Foeniculum*.

34. (Twice Amended) The method of Claim 24 wherein said essential oil producing plant species is selected from the group consisting of *Thymbra spicata* var. *spicata*, *Satureja thymbra*, *Origanum majorana*, *Corydothymus capitatus*, *Origanum vulgare*, *Origanum solymicum*, *Origanum spyleum*, *Origanum bilgeri*, *Origanum minutiflorum*, *Organum saccatum*, *Origanum sriacum*, *Origanum onites*, *Origanum majorana*, *Pinpinella anisum*, and *Foeniculum vulgare*.

35. (Twice Amended) The method of Claim 24 wherein said essential oil producing plant species is selected from the group consisting of *Thymbra spicata* var. *spicata*

(L) Line Ant97- 364-48, *Satureja thymbra* (L) Line Ant98-28-103, *Pinpinella anisum* (L) Line Ant98-223-137, and *Foeniculum vulgare* (L) Line Ant98-89-62.

36. (Twice Amended) The method of Claim 24 wherein said essential oil or component thereof comprises at least one compound selected from the group consisting of *cis*-anethole, *trans*-anethole, anisaldehyde, anis ketone, anisole,  $\beta$ -bisabolene, borneol, bornyl acetate, cadinene, camphene, camphor,  $\Delta$ -3-carene,  $\Delta$ -4-carene, carophyllene, carvone, carvacrol,  $\gamma$ -caryophyllene, cinnamic aldehyde, citronellal, cineol, 1,8-cineole,  $\rho$ -cymene,  $\rho$ -cymene-8-ol, decanal, estragole, eugenol, eugenyl acetate,  $\alpha$ -fenchene, fenchole, fenchone, geranial, geraniol, geranyl acetate, isoborneol, lavanduol, limonene, linalool, linalyl acetate, menthol, menthone, menthyl acetate, *cis*-p-menth-2-en-1-ol, *trans*-p-menth-2-en-1-ol, methoxy phenyl acetone, methyl chavicol, methyleugenol, methylinone, 2-methylpentan-3-one, myrcene, nerol, nonanal, *cis*- $\beta$ -ocimene, *trans*- $\beta$ -ocimene, octanal, 3-octanol,  $\alpha$ -pinene,  $\beta$ -pinene,  $\beta$ -phelladrene,  $\alpha$ -phelladrene, pulegone, sabinene, *cis*-sabinene hydrate, *trans*-sabinene hydrate,  $\gamma$ -terminene, terpenyl acetate,  $\alpha$ -terpinene,  $\gamma$ -terpinene, terpinene-4-ol,  $\alpha$ -terpineol,  $\beta$ -terpineol, terpinolene, 2,3,5,6-tetramethylphenol,  $\alpha$ -thujene, thymil acetate, thymol, and tricyclene.

37. (Twice Amended) The method of Claim 24 wherein said essential oil or component thereof is at least one compound selected from the group consisting of carvacrol, thymol, cymene and anethole.

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Cmt 38. (Twice Amended) The method of Claim 24 wherein said component is anethole.

39. (Twice Amended) The method of Claim 24 wherein said component is *trans*-anethole.

40. Previously Canceled

41. Canceled.

42. (Twice Amended) The method of claim 24 wherein said composition is applied by spraying.

43. Canceled.

D7  
44. (Twice Amended) The method of Claim 24 wherein said composition is applied by fogging.

45. (Twice Amended) The method of Claim 24 wherein said composition is applied in irrigation water.

46. (Twice Amended) The method of Claim 24 wherein said composition further comprises a carrier, and said composition is applied in the soil around the plant.

47. (As filed) The method of Claim 46 wherein said carrier is selected from the group consisting of perlite, commercially available dust preparations, commercially available granule preparations and vermiculite.

D8 48. (Twice Amended) The method of Claim 24 wherein said composition further comprises bacteria which degrades essential oils or components thereof.

49. Canceled.

50. (Previously Amended) A method of inhibiting fungal infections of plants comprising applying a composition comprising an oil-in-water emulsion comprising, in the oil phase, an essential oil or at least one active component thereof in an amount of from 1 to 1000 ppm of the emulsion to the plant, wherein said essential oil or active component thereof is from *Laurus nobilis*.

51. Canceled.

52. Canceled.

53. Canceled.

54. Canceled.

55. Canceled.

56. Canceled.

57. Canceled.



58. Canceled.

59. Canceled.

60. Canceled.

61. Canceled.

62. Canceled.

63. Canceled.

64. Canceled.

65. Canceled.

66. Canceled.

67. Canceled.

68. Canceled.

69. Canceled.

70. (Previously Amended) A method of repelling or killing insects comprising applying a composition to an area, wherein said composition comprises an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or at least one active component thereof in an amount of from 1 to 1000 ppm of

the emulsion, said essential oil from at least one plant selected from the genera *Labiata* and *Umbellifera*.

71. (As filed) The method of Claim 70 wherein said plant species is selected from the group consisting of *Thymbra spicata* var. *spicata*, *Satureja thymbra*, *Origanum majorana*, *Corydothymus capitatus*, *Origanum vulgare*, *Origanum solymicum*, *Origanum spyleum*, *Origanum bilgeri*, *Origanum minutiflorum*, *Organum saccatum*, *Origanum sriacum*, *Origanum onites*, *Origanum majorana*, *Pinpinella anisum*, and *Foeniculum vulgare*.
72. (As filed) The method of Claim 70 wherein said plant species is selected from the group consisting of *Thymbra spicata* var. *spicata* (L) Line Ant97- 364-48, *Satureja thymbra* (L) Line Ant98-28-103, *Pinpinella anisum* (L) Line Ant98-223-137, and *Foeniculum vulgare* (L) Line Ant98-89-62.
73. (As filed) The method of Claim 70 wherein said component of said essential oil is at least one compound selected from the group consisting of *cis*-anethole, *trans*-anethole, anisaldehyde, anis ketone, anisole,  $\beta$ -bisabolene, borneol, bornyl acetate, cadinene, camphene, camphor,  $\Delta$ -3-carene,  $\Delta$ -4-carene, carophyllene, carvone, carvacrol,  $\gamma$ -caryophyllene, cinnamic aldehyde, citronellal, cineol, 1,8-cineole,  $\rho$ -cymene,  $\rho$ -cymene-8-ol, decanal, estragole, eugenol, eugenyl acetate,  $\alpha$ -fenchene, fenchole, fenchone, geranial, geraniol, geranyl acetate, isoborneol, lavanduol, limonene, linalool, linalyl acetate, menthol, menthone, menthyl acetate, *cis*-p-

menth-2-en-1-ol, *trans*-p-menth-2-en-1-ol, methoxy phenyl acetone, methyl chavicol, methyleugenol, methylinone, 2-methylpentan-3-one, myrcene, nerol, nonanal, *cis*- $\beta$ -ocimene, *trans*- $\beta$ -ocimene, octanal, 3-octanol,  $\alpha$ -pinene,  $\beta$ -pinene,  $\beta$ -phelladrene,  $\alpha$ -phelladrene, pulegone, sabinene, *cis*-sabinene hydrate, *trans*-sabinene hydrate,  $\gamma$ -terminene, terpenyl acetate,  $\alpha$ -terpinene,  $\gamma$ -terpinene, terpinene-4-ol,  $\alpha$ -terpineol,  $\beta$ -terpineol, terpinolene, 2,3,5,6-tetramethylphenol,  $\alpha$ -thujene, thymil acetate, thymol, and tricyclene.

74. (As filed) The method of Claim 70 wherein said active ingredient is at least one compound selected from the group consisting of carvacrol, thymol, cymene and anethole.
75. (As filed) The method of Claim 70 wherein said active ingredient is anethole.
76. (As filed) The method of Claim 70 wherein said active ingredient is *trans*-anethole.
77. Previously Canceled
78. (As filed) The method of Claim 70 wherein said active ingredient is combined with at least one inactive oil, wherein said composition is formulated as a fogging vapor.
79. (As filed) The method of Claim 70 wherein said composition further comprises a carrier.

80. (As filed) The method of Claim 79 wherein said carrier is selected from the group consisting of perlite, commercially available dust preparations, commercially available granule preparations, and vermiculite.
81. (As filed) The method of Claim 70 wherein said composition is formulated as a cream.
82. (As filed) The method of Claim 70 wherein said composition is formulated as a powder.
83. (As filed) The method of Claim 70 wherein said composition is formulated in paraffin.
84. (As filed) The method of Claim 70 wherein said composition is formulated in paint.
85. (As filed) The method of Claim 84 wherein said paint is an oil-based paint.
86. (As filed) The method of Claim 70 wherein said insects are at least one selected from the group consisting of flies, mosquitoes, aphids, fleas, ticks, spiders, cockroaches, ants, termites, and mites.
87. Canceled.
88. Previously Canceled.

D<sup>9</sup> 89. (Twice Amended) A composition to repel or kill insects, fungi, nematodes and bacteria, comprising, an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or a component thereof in an amount of from 1 to 1000 ppm of the emulsion, wherein said essential oil or component thereof is derived from at least one plant species in the Family *Labiatae* and *Umbellifera*, wherein said composition further comprises at least one other pesticide.

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D<sup>10</sup> 90. (Amended) A fungicide composition comprising an oil-in-water emulsion comprising, in the oil phase, an essential oil, or at least one component thereof from *Laurus nobilis* in an amount of from 1 to 1000 ppm of the emulsion wherein said composition further comprises at least one other fungicide.

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91. (As filed) The method of Claim 24 wherein said composition further comprises at least one other pesticide.

✓  
92. Canceled.

93. (As filed) The method of Claim 50 wherein said composition further comprises at least one other fungicide.

✓  
94. Canceled.

✓  
95. Canceled.

96. (As filed) The method of Claim 70 wherein said composition further comprises at least one other pesticide.

97. (As filed) The method of Claim 24 wherein said essential oil is in an emulsion in water.

98. (As filed) The method of Claim 97 wherein said oil is present in an amount of greater than 10 ppm.

99. (As filed) The method of Claim 97 wherein said oil is present in an amount of greater than 25 ppm.

100. Canceled.

101. Canceled.

102. Canceled.

103. Canceled.

104. Canceled.

105. Canceled.

106. Canceled.

107. Canceled.

108. Canceled.

109. Canceled.

110. Canceled.

111. Canceled.

112. Canceled.

113. Canceled.

114. (Amended) A composition to repel or kill insects, fungi, nematodes and bacteria, comprising, an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or a component thereof in an amount of from 1 to 1000 ppm of the emulsion, wherein said essential oil or component thereof is derived from at least one plant species in the Family *Labiatae* and *Umbellifera* wherein said composition further comprises an emulsifying agent which is an oil.

115. Canceled.

116. Canceled.

117. (As Filed) The method of Claim 24 wherein said emulsion further comprises a vegetable oil.

118. Canceled.

119. (Amended) A composition to repel or kill insects, fungi, nematodes and bacteria, comprising, an oil-in-water emulsion comprising, in the oil phase, as an active ingredient, an essential oil or a component thereof in an amount of from 1 to 1000

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cm

ppm of the emulsion, wherein said essential oil or component thereof is derived from at least one plant species in the Family *Labiatae* and *Umbellifera*, and wherein said emulsion further comprises a vegetable oil.

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120. ~~Canceled.~~

121. Canceled.

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D13

122. (Newly Added) The composition of Claim 5 further comprising a bacterium which degrades essential oils or components thereof.

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